

What Is Claimed Is:

1. A cable distribution system, comprising:

a headend receptive of signals from a plurality of video sources, the headend including  
5 a plurality of receiver/decoders that are each controllable to receive/decode a selected video  
channel and provide the video channel at a selected frequency, selected ones of the plurality  
of video channels being multiplexed together to create one or more multiplexed channel  
signals;

a plurality of service modules associated with the headend, each service module  
10 receiving one or more of the multiplexed channel signals and providing it to each of a  
plurality of frequency converters within each service module that each convert one of the  
video channels to a predetermined frequency, the predetermined output frequency of each  
frequency converter in a given service module being different from each other, each of the  
converted video channels created by a given service module being combined together into a  
15 single signal; and

a plurality of interface units associated with each service module, each interface unit  
being located at a customer location, each interface unit receptive of the single signal from the  
service module, the interface unit passing only one of the video channels in the single signal  
to a video displaying apparatus.

20

2. A cable distribution system as defined in claim 1, wherein the headend is a  
local headend located in a building or set of buildings where the customer locations are.

3. A cable distribution system as defined in claim 2, further including a regional headend located at a location remote from the building or set of buildings, the regional headend providing video channels at selected frequencies to the local headend.

5 4. A cable distribution system as defined in claim 2, wherein the plurality of service modules are dispersed throughout the building or set of buildings, there being at least one service module for each floor of the building or set of buildings.

10 5. A cable distribution system as defined in claims 1, further including cabling running between each service module and the plurality of interface modules associated therewith, the cabling being bandwidth limited so as to not efficiently carry signals appreciably above 350 MHz.

15 6. A cable distribution system as defined in claim 5, wherein the cabling is metallic coaxial cabling.

20 7. A cable distribution system as defined in claim 1, further including cabling running between the headend and each of the plurality of service modules associated therewith, the cabling having sufficient bandwidth capacity to be able to efficiently carry signals at least as high as 750 MHz.

8. A cable distribution system as defined in claim 2, wherein the local headend  
also includes a block of Personal Video Recorders.

9. A cable distribution system as defined in claim 2, wherein the local headend  
5 also includes a Video On Demand Server.

10. A cable distribution system as defined in claim 2, wherein the local headend  
also includes a Personal Computer.

10 11. A cable distribution system as defined in claim 2, wherein the local headend  
also includes a DOCSIS frequency converter.

12. A cable distribution system as defined in claim 11, wherein a DOCSIS forward  
channel being carried from an internet service provider to a customer is converted by the  
15 DOCSIS frequency converter to a different frequency for passage to the plurality of service  
modules and associated interface units.

13. A cable distribution system as defined in claim 1, wherein each of the  
frequency converters in each of the plurality of service modules is a programmable converter.

20 14. A cable distribution system as defined in claim 1, further including a different  
bandpass filter associated with each frequency converter.

15. A cable distribution system as defined in claim 1, wherein each interface unit does not include a microprocessor.

5 16. A cable distribution system as defined in claim 1, wherein each interface unit does not include a frequency converter.

17. A cable distribution system as defined in claim 1, wherein each service module utilizes the same predetermined frequencies as each other service module.

10 18. A cable distribution system as defined in claim 1, wherein each receiver/decoder receives and decodes a given video channel and that channel from that receiver/decoder can be displayed on every video displaying apparatus associated with that local headend.

15 19. A cable distribution system as defined in claim 1, wherein the interface module passes information back upstream to its associated service module that includes channel selection information.

20 20. A cable distribution system as defined in claim 19, wherein the information passed back upstream to the service module also includes a DOCSIS return channel that is passed by the service module back to the headend and back to an internet service provider.

21. A cable distribution system as defined in claim 1, further including a processor and associated database in communication with the headend and the service module, the processor being functional to control the operation of the receiver/decoders and the database  
5 assisting the microprocessor in this functionality and in storing customer viewing preferences.

22. A cable distribution system as defined in claim 1, wherein the local service module will only convert a selected video channel to the predetermined output frequency associated with a particular interface unit if that interface unit is authorized to receive that  
10 selected video channel.

23. A cable distribution system as defined in claim 2, wherein the local headend includes a cable mode transmission system (CMTS).

24. A cable distribution system, comprising:

a headend receptive of signals from a plurality of video sources, the headend including a plurality of receiver/decoders that are each controllable to receive/decode a selected video channel and provide the video channel at a selected frequency, selected ones of the plurality of video channels being multiplexed together to create one or more multiplexed channel signals;

a plurality of service modules associated with the headend, each service module receiving one or more of the multiplexed channel signals and providing it to each of a plurality of frequency converters within each service module that each convert one of the video channels to a predetermined frequency and create a signal containing that video channel; and

a plurality of interface units associated with each service module, each interface unit being located at a customer location, each interface unit receptive of one of the signals from the service module, the interface unit passing the video channel in the signal to a video displaying apparatus.

25. A cable distribution system as defined in claim 24, wherein cabling between the service modules and the interface units is in a home run architecture.

26. A cable distribution system as defined in claim 24, wherein cabling between the service modules and the interface units is in a loop through architecture.

27. A cable distribution system, comprising:

a local headend receptive of signals from a plurality of video sources including signals from a regional or cable headend, the local headend including a plurality of receiver/decoders that are each controllable to receive/decode a selected video channel and provide the video  
5 channel at a selected frequency, selected ones of the plurality of video channels being multiplexed together to create one or more multiplexed channel signals;

a plurality of local service modules associated with the local headend, each local service module receiving one or more of the multiplexed channel signals and providing it to each of a plurality of frequency converters that each convert one of the video channels to a  
10 predetermined frequency, the predetermined output frequency of each frequency converter in a given local service module being different from each other, each of the converted video channels created by a given local service module being combined together into a single signal; and

a plurality of interface units associated with each local service module, each interface  
15 unit being located at a customer location, each interface unit receptive of the single signal from the local service module, the interface unit passing only one of the video channels in the single signal to a video displaying apparatus;

wherein each of the local service modules utilizes frequencies for its respective frequency converters that are identical to the frequencies utilized by each other local service  
20 modules.

28. A cable distribution system, comprising:

a regional headend including at least one of a cable headend and a satellite delivery  
and transportations system;

a local headend located in one of the vicinity of or within a building or set of  
5 buildings, the local headend being receptive of signals from a plurality of video sources  
including signals from the regional headend, the local headend including a plurality of  
receiver/decoders that are each controllable to receive/decode a selected video channel and  
provide the video channel at a selected frequency, selected ones of the plurality of video  
channels being multiplexed together to create one or more multiplexed channel signals;  
10 a plurality of local service modules located within the building or set of buildings and  
associated with the local headend, each local service module receiving one or more of the  
multiplexed channel signals and providing it to each of a plurality of frequency converters  
that each convert one of the video channels to a predetermined frequency, the predetermined  
output frequency of each frequency converter in a given local service module being different  
15 from each other, each of the converted video channels created by a given local service module  
being combined together into a single signal; and

a plurality of interface units associated with each local service module, each interface  
unit being located at a customer location within the building or set of buildings, each interface  
unit receptive of the single signal from the local service module, the interface unit passing  
20 only one of the video channels in the single signal to a video displaying apparatus.



29. A cable distribution system as defined in claim 28, wherein the local service module will only convert a selected video channel to the predetermined output frequency associated with a particular interface unit if that interface unit is authorized to receive that selected video channel.